

CLAIMS

In the claims:

1. A materials reduction apparatus comprising:

a rotatably mounted rotor having radial projections;

5 an anvil normally fixed and in proximal relation to the projections of the rotor;

a conveying mechanism for conveying materials to be reduced into the rotating rotor and projections, and to be carried by said projections for impacting said anvil to reduce in size the components of said materials;

10 a screen also in normally fixed proximal relation to said projections of the rotor for engaging said components to further reduce the size of the components and to provide passage of said further reduced components through screen openings in said screen and out of the path of the projections for collection and conveyance away from said apparatus;

15 said anvil and screen mounted to have common pivotal movement away from said rotor projections and as pivoted away from said projections providing a bypass for materials carried by said projections to thereby avoid anvil and screen reduction; and

20 a pivotal resist member providing resistance to said pivotal movement while permitting said pivotal movement and thus providing a bypass of materials in response to a determined force generated by reduction resisting components of the material.

2. A material reduction apparatus as defined in Claim 1 wherein said pivotal resist member includes a bias member extended between a frame component of said apparatus and said anvil and screen to resist said common pivotal movement of said anvil and screen.

3. A material reduction apparatus as defined in Claim 1 wherein said pivotal resist member includes a latch mechanism and further including a spring biased cam

member engaging a cam surface, and said reduction by said screen and anvil urges said cam member against said spring bias for retraction and release of said cam member in response to excessive reduction resistance.

4. A material reduction apparatus as defined in Claim 3 wherein said cam
5 surface is provided by a slidable member urged into a first slidable position in a first
slidable direction by a biasing member and a stop that prevents further movement in
said first slidable direction, said biased cam member not urging said slidable
member in said first slidable direction against said stop when said anvil and screen
are urged away from said projections and said biased cam member urging said
10 slidable member against said biasing member for closing of said bypass.

5. A material reduction apparatus as defined in Claim 1 wherein said pivotal
resist member is a biasing member urging the anvil and screen to the normally fixed
proximal position and including increased resistance as the anvil and screen are
pivoted away from said proximal position.